

Appl No.:10/643,063

Atty. Dkt.: UCF-372

REMARKS/ARGUMENTS

Favorable consideration of this application is respectfully requested. Applicant has amended claims 1, 13 and 19 and canceled claims 3-4, 6, 9 and 17. Favorable reconsideration of this application is, consequently, earnestly solicited in view of the following remarks.

Claims 1-3, 5, 7, 8, 10-16 and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as invention.

In an amendment response filed on December 22, 2008 Applicant amended the specification to define "discontinuous electrode" as two or more adjacent finger-like extensions that are separated by a distance and connected together at one end. Applicant believes that the amended paragraph is fully responsive to the Examiners allegation that the claims are indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Thus, removal of the rejection is respectfully requested.

Claims 1-3, 5, 7-8, 11-15 and 18-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama (6,469,765) in view of Tai (2001/0046027A1).

In regard to Matsuyama, Figs. 9 and 10 show a LCD having a continuous common electrode (500), a discontinuous common electrode (410) and a discontinuous pixel electrode (300) with the discontinuous common electrode located below the discontinuous pixel electrode (300). Unlike Matsuyama, in claims 1, 2, 5, 7, 8, 10-16 and 18 the pixel electrode (25) is a continuous electrode. Claims 1 and 13 were previously amended to clarify that the second discontinuous common electrode layer is located above the continuous pixel electrode shown in Figs. 2-5 and 9.

The Examiner has combined Tai with Matsuyama because Tai teaches use of a discontinuous common electrode 409 above a continuous pixel electrode 406. Applicant respectfully disagrees with the Examiner's allegation that Tai teaches an in-plane switching device and that the suggested combination would function. The mere fact that a word search reveals a LCD pixel configuration with a discontinuous common electrode above a pixel electrode is not sufficient to support a section 103 obviousness rejection.

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As stated by the Supreme Court in KSR, "While the sequence of these questions [TSM] might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls." KSR, 550 U.S. at 1, 82 USPQ2d at 1391 (2007) (see MPEP 2141(II)).

The Examiner cites Tai to suggest first swapping the position of the discontinuous pixel electrode 300 with the position of the discontinuous common electrode 410 in Matsuyama so that the common electrode 410 is above the pixel electrode 300. Next the Examiner suggests replacing the discontinuous pixel electrode 300 of Matsuyama with the continuous pixel electrode 302 of Tai. There is no suggestion in Matsuyama nor Tai to make the suggested substitutions.

Furthermore, changing the position of the pixel and common electrodes changes to operation of the LCD and changing the discontinuous pixel electrode to a continuous pixel electrode further changes the operation. The Examiner has not provided a basis for the substitution. Office personnel must provide an explanation to support an obviousness rejection . . . clearly setting forth findings of fact and the rationale to support a rejection. The Examiner cites [0031] of Tai to support his conclusion. However, Tai does not include an upper continuous common electrode as claimed in claims 1, 13 and 19.

Matsuyama clearly teaches reducing the capacitance between the electrodes by decreasing the overlap between the pixel electrode 300 and the first common electrode 410 (Fig. 10) to improve display characteristics (col. 22 lines 15-29 and 35-40). Matsuyama (fig. 9-10) requires the discontinuous pixel and discontinuous common electrode to only partially overlap. Replacing the Matsuyama discontinuous pixel electrode 300 with the Tai continuous pixel electrode 302 would render the Matsuyama inoperable or, at best, having degraded display characteristics.

According to MPEP 2143.01, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is not suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Tai mentions in-plane switching on page one paragraph [0002] including the disadvantages of ISP. Paragraph [0003] teaches use of fringe field switching. Then the switching is not mentioned again. Applicant assumes that the Tai invention uses fringe-field switching. Tai is silent in regard to voltage applied to the electrodes the electric field

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generated in the liquid crystal layer. Claims 1, 13 and 19 clearly recite applying a first voltage V_{H1} to the first continuous common electrode 21, a second voltage V_{H2} not equal to the first voltage V_{H1} to the discontinuous second common electrode 23 for fast response and wide viewing angles. Matsuyama does teach a first voltage and second different voltage applied to the first and second common electrodes, respectively. Tai does not teach use of two common electrodes.

Additionally, the invention claimed in independent claims 1, 13 and 19 includes unequal first and second voltages applied to the first and second common electrodes wherein the two different voltages are not dependent on the input data while the voltage applied to the pixel electrode is dependent on the input data as described on page 7 between lines 13-17. Applicant has amended claims 1, 13 and 19 to clarify the non-dependency of input data for the first and second voltages and the input dependent voltage applied to the pixel electrode.

Applicant has further amended claims 1, 13 and 19 to clarify that the novel features of the invention employ a crossed-field effect in the thin film transistor liquid crystal display so that the display provides fast response to high input data rates and allows for wide viewing angles for viewers (page 12 at lines 3-9).

The mere fact that someone in the art can rearrange parts of a reference device to meet the terms of a claim is not by itself sufficient to support a finding of obviousness. There is no suggestion to combine the references as advanced by the Examiner, except using Applicant's invention as a template through hindsight reconstruction of Applicants claims, and a factfinder should be aware of the distortion caused by hindsight bias and must be cautious of argument reliant upon ex post reasoning. *Ex Parte Crawford et al*, Appeal 20062429, Decided May 30, 2007." *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 82 USPQ2d 1397. As such, hindsight reconstruction is improper.

For these reasons, Applicant disagrees with the Examiner's allegation that it would be obviousness for one skilled in the art to combine Matsuyama with Tai, that the combination would produce the claimed invention or that the suggested combination would even work.

Applicant believes that claims 1, 13 and 19 are allowable under 35 U.S.C. 103(a) over Matsuyama in view of Tai, and that claims 2-3, 5, 7-8, 11-12, 14-15, 18 and 20, by way of dependency, are allowable. Thus, removal of the rejection is respectfully requested.

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Claims 10 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama in view of Tai, and further in view of Nakanishi (6,819,384).

Combining Nakanishi to Matsuyama and Tai does not cure the deficiencies of Matsuyama and Tai as pointed out in regard to independent claims 1, 13 and 19. For this reason, and the reasons previously provided, Applicant believes that claims 10 and 16 are allowable and requests removal of the rejection.

In view of the foregoing considerations, it is respectfully urged that claims 1-2, 5, 7-8, 10-16, and 18-20 be allowed. Such action is respectfully requested. If the Examiner believes that an interview would be helpful, the Examiner is requested to contact the attorney at the below listed number.

Respectfully Submitted;



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